What is claimed is:

1. An optical coupler system comprising:

a housing;

a sleeve situated in said housing; and

a ferrule situated in said sleeve.

2. The system of claim 1, wherein said sleeve is attached to said housing.

3. The system of claim 2, wherein said sleeve has a slit.

4. The system of claim 3, further comprising a ferrule situated in said sleeve.

5. The system of claim 4, wherein said ferrule is held firmly in said sleeve.

6. The system of claim 5, wherein:

said ferrule has an outside diameter slightly larger than an inside diameter of said sleeve with said ferrule not in said sleeve; and

the inside diameter of said sleeve may be expanded against a spring-like tension to a size of the outside diameter of said ferrule with said ferrule in said sleeve.

7. The system of claim 6, wherein said ferrule holds an optical fiber.

8. The system of claim 7, wherein an end of said optical fiber in said ferrule is aligned with and optoelectronic element situated in said housing.

9. An optical coupling system comprising:

a support structure;

a holding structure attached to said support structure; and

an optical medium holder held by said holding structure.

10. The system of claim 9, wherein said holding structure comprises a sheet of material semi-enclosing said optical medium holder.

11. The system of claim 10, wherein the sheet of material applies a pressure of contact at least partially around on said optical medium holder.

12. The system of claim 11, further comprising an optoelectronic element holder attached to said support structure.

13. The system of claim 12, wherein said optical medium holder and said optoelectronic element holder have a certain alignment relative to each other.

14. The system of claim 13, wherein said holding structure maintains the certain alignment of said optical medium holder with said optoelectronic element holder with virtually no wiggle.

15. The system of claim 14, wherein the sheet of material is a sleeve having a slit.

16. The system of claim 15, wherein:

said optical medium holder has an outside diameter slightly larger than an inside diameter of said sleeve with said optical medium holder not in said sleeve; and

the inside diameter of said sleeve may be expanded against a spring-like tension to a size of the outside diameter of said optical medium holder with said optical medium holder in said sleeve.

17. The system of claim 16, wherein:

said optical holder may hold an optical fiber; and

said optoelectronic element holder may hold a light source.

18. The system of claim 17, wherein the light source is a laser.

19. The system of claim 18, wherein:

the optical fiber is a single mode fiber;

the laser is a vertical cavity surface emitting laser; and

the holding structure maintains a certain alignment between an end of the single mode fiber and the vertical cavity surface emitting laser.

20. The system of claim 16, wherein:

said optical medium holder may hold an optical fiber; and

said optoelectronic element holder may hold a detector.

21. An optical assembly comprising:

a metal barrel;

a non-metallic sleeve having a slit along a length of the sleeve and a strip of metallization adhered to an external surface of the sleeve along the length of the sleeve;

an optical fiber ferrule insertable in the sleeve; and

an optoelectronic element housing attached to the barrel; and

wherein:

the sleeve is attached in the barrel by the metallization strip which is attached to the metal barrel; and

the sleeve expands with flex-like resistance upon an insertion of the optical fiber ferrule and holds the ferrule in position relative to the barrel.

22. The assembly of claim 21, wherein the sleeve maintains an alignment between the optical fiber ferrule and the optoelectronic element housing.

23. The assembly of claim 22, wherein:

the optoelectronic element housing contains an optoelectronic element;

the sleeve holds the inserted optical fiber ferrule having a fiber tip; and

the sleeve maintains a set alignment between the optoelectronic element and the fiber tip.

24. The assembly of claim 23, further comprising an optical subassembly situated between the fiber tip and the optoelectronic element.

25. The assembly of claim 24, wherein:
the optoelectronic element is a laser; and
the fiber tip is a portion of an optical fiber extending out from the optical fiber ferrule.

26. The assembly of claim 24, wherein:
the optoelectronic element is a detector; and
the fiber tip is a portion of an optical fiber extending out from the optical fiber ferrule.

27. The assembly of claim 25, wherein:
the laser is a vertical cavity surface emitting laser; and
the optical fiber is a single mode fiber.

28. Means for optical coupling alignment comprising:
means for supporting means for elements;
means for supporting an optical medium;

means for holding the means for holding an optical medium, having an attachment to the means for supporting means for elements; and

means for holding an optoelectronic element, attached to the means for supporting means for elements; and

wherein the attachment of the means for holding the means for holding the optical medium, maintains a preset alignment between an optical medium and an optoelectronic element.

29. The means for optical coupling alignment of claim 28, wherein:

the optical medium is an optical fiber having an end;

the optoelectronic element is a laser; and

the preset alignment is between the end of the optical fiber and the laser.

30. The means for optical coupling alignment of claim 30, wherein the means for holding the means for holding an optical medium is a split sleeve that holds the means for holding an optical medium with a flex-like tension.

31. A method for optical coupling comprising:

attaching an optoelectronic element to a support structure;

obtaining a sleeve-like structure having a slit and a spring-like flexing properties so that the structure can be expanded with spring-like resistance to expansion;

applying an area of metallization to an external surface of the sleeve-like structure;

attaching the area of metallization to the support structure with a connection to provide an attachment of the sleeve-like structure to the support structure;

inserting an optical medium holder into the sleeve-like structure wherein the outside dimension of the optical medium holder is larger than an inside dimension of the sleeve-like structure, and the sleeve-like structure having the spring-like resistance to expansion upon insertion of the optical medium holder in that the sleeve-like structure holds the optical medium holder with a

form of grip and the optical medium holder does not move or wiggle relative to the optoelectronic element.

32. The method of claim 31, wherein the optical medium holder has an optical medium.

33. The method of claim 32, further comprising aligning the optical medium with the optoelectronic element.

34. The method of claim 33, wherein:
the optical medium is an optical fiber; and
the optoelectronic element is a light source.

35. The method of claim 33, wherein:
the optical medium is an optical fiber; and
the optoelectronic element is a detector.

36. The method of claim 34, wherein:
the optical medium is a single mode fiber; and
the light source is a laser.

37. The method of claim 36, wherein the laser is a vertical cavity surface emitting laser.

38. The method of claim 37, wherein the laser is single mode.